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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/998,132	12/03/2001	Leonardo W. Estevez	TI-31073	4560
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TEXAS INSTRUMENTS INCORPORATED			TABATABAI, ABOLFAZL	
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2625

DATE MAILED: 11/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/998,132

Applicant(s)

ESTEVEZ, LEONARDO W.

Examiner

Abolfazl Tabatabai

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on application filed on December 3, 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-13 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 14, 15, 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 December 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 6, 8, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al (U S 6,393,163 B1) in view of Sharir et al (U S 6,297,853 B1).

Regarding claim 1, Burt discloses a motion detection image recording system, comprising:

an image sensor operable to view a surveillance site(fig. 12 element 1200 and column 20, lines 52-55) and output real-time image data corresponding to the site (column 14, lines 8-14) ;

a processor operable to receive the image data from the image sensor (fig.12 element 1202);

a memory coupled to the processor (column 13, lines 36-37 and column 15, lines 20-25).

However, Burt is silent about the specific details regarding the steps of:

a transformation application residing in the memory and executable by the processor, the transformation application operable to detect a real-time feature segment associated with the site from the image data; and,

an analysis engine residing in the memory and executable by the processor, the analysis engine operable to compare the real-time feature segment with a baseline feature segment and initiate recording of the image data if the feature segment comparison exceeds a predetermined criteria.

In the same field (detecting apparatus) of endeavor, however, Sharir discloses apparatus and method for detecting, identifying and incorporating advertisements in a video image comprising the steps of:

a transformation application residing in the memory and executable by the processor, the transformation application operable to detect a real-time feature segment associated with the site from the image data (column 3, lines 14-44); and,

an analysis engine residing in the memory and executable by the processor, the analysis engine operable to compare the real-time feature segment with a baseline feature segment and initiate recording of the image data if the feature segment comparison exceeds a predetermined criteria (column 3, lines 14-44 and column 7, lines 33-35).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use transformation application and compare the real-time feature segment with a baseline feature segment and recording of the image as taught by Sharir in the system of Burt because Sharir provides an improve

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system for detecting, identifying and scaling in a video frame, suitable distinct targets and areas and inserting into areas virtual images stored in the memory of the system and a particular feature of this apparatus is to operate the system in real time, so it is useful for advertising in sports courts.

Regarding claim 3, Burt is silent about the specific details wherein the analysis engine is operable to identify an occlusion of the real-time feature segment relative to the baseline feature segment and initiate recording of the scene in response to identifying the occlusion.

In the same field (detecting apparatus) of endeavor, however, Sharir discloses apparatus and method for detecting, identifying and incorporating advertisements in a video image comprising the analysis engine is operable to identify an occlusion of the real-time feature segment relative to the baseline feature segment and initiate recording of the scene in response to identifying the occlusion (fig. 10B element 350).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use identify an occlusion of the real-time feature segment as taught by Sharir in the system of Burt because Sharir provides an improve system for detecting, identifying and scaling in a video frame, suitable distinct targets and areas and inserting into areas virtual images stored in the memory of the system and a particular feature of this apparatus is to operate the system in real time, so it is useful for advertising in sports courts.

Regarding claim 6, Burt is silent about the specific details wherein the processor is further operable to receive feature segment criteria, and wherein the

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analysis engine initiates recording of the image data if the feature segment comparison exceeds the feature segment criteria.

In the same field (detecting apparatus) of endeavor, however, Sharir discloses apparatus and method for detecting, identifying and incorporating advertisements in a video image comprising the analysis engine is operable to identify an occlusion of the real-time feature segment relative to the baseline feature segment and initiate recording of the scene in response to identifying the occlusion (fig. 10B element 350).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use the processor is further operable to receive feature segment criteria, and wherein the analysis engine initiates recording of the image data if the feature segment comparison exceeds the feature segment criteria. as taught by Sharir in the system of Burt because Sharir provides an improve system for detecting, identifying and scaling in a video frame, suitable distinct targets and areas and inserting into areas virtual images stored in the memory of the system and a particular feature of this apparatus is to operate the system in real time, so it is useful for advertising in sports courts.

Regarding claim 8, Burt discloses a method for motion detection image recording, comprising:

generating a baseline feature segment associated with a surveillance site (column 20, lines 52-55);

receiving real-time image data corresponding to the surveillance site (column 14, lines 8-14);

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However, Burt is silent about the specific details regarding the steps of:

- detecting a real-time feature segment associated with the surveillance site from the real-time image data;

- comparing the real-time feature segment with the baseline feature segment; and,

- recording the real-time image data if the comparison of the real-time feature segment with the baseline feature segment exceeds a feature segment criteria.

In the same field (detecting apparatus) of endeavor, however, Sharir discloses apparatus and method for detecting, identifying and incorporating advertisements in a video image comprising the steps of:

- detecting a real-time feature segment associated with the surveillance site from the real-time image data (column 3, lines 14-44);

- comparing the real-time feature segment with the baseline feature segment (column 3, lines 14-440; and,

- recording the real-time image data if the comparison of the real-time feature segment with the baseline feature segment exceeds a feature segment criteria (column 7, lines 33-35).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use transformation application and compare the real-time feature segment with a baseline feature segment and recording of the image as taught by Sharir in the system of Burt because Sharir provides an improve system for detecting, identifying and scaling in a video frame, suitable distinct

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targets and areas and inserting into areas virtual images stored in the memory of the system and a particular feature of this apparatus is to operate the system in real time, so it is useful for advertising in sports courts.

Regarding claim 10, Burt discloses the method wherein generating a baseline feature segment comprises: receiving baseline image data corresponding to the surveillance site (column 2, lines 52-67).

However, Burt is silent about the specific details regarding the steps of:

detecting a plurality of feature segments corresponding to the surveillance site from the baseline image data; and, identifying one of the plurality of feature segments as the baseline feature segment.

In the same field (detecting apparatus) of endeavor, however, Sharir discloses apparatus and method for detecting, identifying and incorporating advertisements in a video image comprising the steps of:

detecting a plurality of feature segments corresponding to the surveillance site from the baseline image data (column 11, lines 40-41); and, identifying one of the plurality of feature segments as the baseline feature segment (column 11, lines 35-39).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use detecting a plurality of feature segment and identifying one of the plurality of feature segment as taught by Sharir in the system of Burt because Sharir provides an improve system for detecting, identifying and scaling in a video frame, suitable distinct targets and areas and inserting into areas virtual images stored in the memory of the system and a

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particular feature of this apparatus is to operate the system in real time, so it is useful for advertising in sports courts.

Regarding claim 11, Burt is silent about the specific details wherein comparing the real-time feature segment comprises determining whether an occlusion is present in the real-time feature segment relative to the baseline feature segment, and wherein recording the real-time image data comprises recording the real-time image data if the occlusion exceeds the feature segment criteria.

In the same field (detecting apparatus) of endeavor, however, Sharir discloses apparatus and method for detecting, identifying and incorporating advertisements in a video image comprising the step of comparing the real-time feature segment comprises determining whether an occlusion is present in the real-time feature segment relative to the baseline feature segment, and wherein recording the real-time image data comprises recording the real-time image data if the occlusion exceeds the feature segment criteria (column 7, lines 30-35 and column 11, lines 35-41).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use recording the real time image data as taught by Sharir in the system of Burt because Sharir provides an improve system for detecting, identifying and scaling in a video frame, suitable distinct targets and areas and inserting into areas virtual images stored in the memory of the system and a particular feature of this apparatus is to operate the system in real time, so it is useful for advertising in sports courts.

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Claim 13, is similarly analyzed as claim 10, above.

3. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al (U S 6,393,163 B1) in view of Otsuka et al (U S 6,263,089 B1).

Regarding claim 16, Burt discloses a method for image recording, comprising:

generating baseline feature segments corresponding to a surveillance site (column 15, lines 15-18 and column 20, lines 52-55);

receiving real-time image data corresponding to the surveillance site (column 14, lines 8-14);

However, Burt is silent about the specific details regarding the steps of:

generating real-time feature segments associated with the surveillance site from the real-time image data (column 14, lines 8-14).

(column 14, lines 8-14);

However, Burt is silent about the specific details regarding the steps of:

determining whether an occlusion is present in one or more of the real-time feature segments; and,

recording the real-time image data if the occlusion is present in one or more of the real-time feature segments.

In the same field (detecting apparatus) of endeavor, however, Otsuka discloses apparatus and method for extracting image features from image sequence comprising the step of:

determining whether an occlusion is present in one or more of the real-time feature segments (column 31, lines 54-60); and,

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recording the real-time image data if the occlusion is present in one or more of the real-time feature segments (column 6, lines 25-27 and column 15, lines 35-43).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use recording the real time image data as taught by Otsuka in the system of Burt because Otsuka provides an improve technique for detecting an occlusion of a dynamic target within an image sequence and the following advantageous can be obtained according to Otsuka system by use of the motion trajectory when measuring the image features. Also it is advantageous to use the histogram of the tangent planes or the partial features can be measured robustiously with respect to the noise and the occlusion.

17. The method of claim 16, further comprising: receiving feature segment criteria; determining whether the occlusion exceeds the feature segment criteria; and wherein recording comprises recording the real-time image data if the occlusion exceeds the feature segment criteria.

Claim 18, is similarly analyzed as claim 5 above.

4. Claims 2, 5, 7 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al (U S 6,393,163 B1) and Sharir et al (U S 6,297,853 B1) as applied to claims 1 and 8 above, and further in view of Otsuka et al (U S 6,263,089 B1).

Regarding claim 2, Burt and Sharir are silent about the specific details wherein the transformation application is further operable to generate a histogram of the real-time feature segment, and wherein the analysis engine is

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operable to compare the histogram of the real-time feature segment with a histogram of the baseline feature segment.

In the same field (detecting apparatus) of endeavor, however, Otsuka discloses apparatus and method for extracting image features from image sequence comprising the transformation application is further operable to generate a histogram of the real-time feature segment, and wherein the analysis engine is operable to compare the histogram of the real-time feature segment with a histogram of the baseline feature segment (column 7, lines 36-44).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use histogram as taught by Otsuka in the system of Burt because Otsuka provides an improve technique for detecting an occlusion of a dynamic target within an image sequence and the following advantageous can be obtained according to Otsuka system by use of the motion trajectory when measuring the image features. Also it is advantageous to use the histogram of the tangent planes or the partial features can be measured robustiously with respect to the noise and the occlusion.

Regarding claim 5, Burt and Sharir are silent about the specific details wherein the transformation application comprises a Hough routine operable to extract the real-time feature segment from the image data.

In the same field (detecting apparatus) of endeavor, however, Otsuka discloses apparatus and method for extracting image features from image sequence comprising the transformation application comprises a Hough routine operable to

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extract the real-time feature segment from the image data (column 8, lines 47-55).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use Hough routine as taught by Otsuka in the system of Burt because Otsuka provides an improve technique for detecting an occlusion of a dynamic target within an image sequence and the following advantageous can be obtained according to Otsuka system by use of the motion trajectory when measuring the image features. Also it is advantageous to use the histogram of the tangent planes or the partial features can be measured robustiously with respect to the noise and the occlusion.

Regarding claim 7, Burt and Sharir are silent about the specific details wherein the feature segment criteria comprises an occlusion ratio, and wherein the analysis engine initiates recording of the image data if an occlusion of the real-time feature segment exceeds the occlusion ratio relative to the baseline feature segment.

In the same field (detecting apparatus) of endeavor, however, Otsuka discloses apparatus and method for extracting image features from image sequence comprising the transformation application comprises the feature segment criteria comprises an occlusion ratio, and wherein the analysis engine initiates recording of the image data if an occlusion of the real-time feature segment exceeds the occlusion ratio relative to the baseline feature segment (column 13, lines 26-39). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use an occlusion ratio as taught by Otsuka in the system

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of Burt because Otsuka provides an improve technique for detecting an occlusion of a dynamic target within an image sequence and the following advantageous can be obtained according to Otsuka system by use of the motion trajectory when measuring the image features. Also it is advantageous to use the histogram of the tangent planes or the partial features can be measured robustiously with respect to the noise and the occlusion.

Claim 9 is similarly analyzed as claim 5 above.

5. Claims 4 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burt et al (U S 6,393,163 B1) and Sharir et al (U S 6,297,853 B1) as applied to claims 1 and 8 above, and further in view of Smith (U S 6,757,008 B1).

Regarding claim 4, Burt and Sharir are silent about the specific details wherein the image sensor comprises an analog camera, and further comprising an analog-to-digital converter operable to receive analog image data from the analog camera and transmit digital image data to the processor.

In the same field (detecting apparatus) of endeavor, however, Smith discloses video surveillance system comprising the image sensor comprises an analog camera 9fig. 4 element 41), and further comprising an analog-to-digital converter (fig. 4 element 93) operable to receive analog image data from the analog camera and transmit digital image data to the processor (column 8, lines 18-22). It would have been obvious to a person of ordinary skill in the art at the time the invention was made to use analog camera and A/D converter as taught by Smith in the system of Burt because Smith provides an improved method of electronic

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video surveillance. And the advantage of the method is the ability to use more bits per pixel than the other methods.

Claim 12 is similarly analyzed as claim 4 above.

Allowable Subject Matter

6. Claim 14, 15, 19 and 20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Other prior art cited

U. S. Patent (6,298,143 B1) to Kikunchiet al is cited for moving target detection system and moving target detecting method.

U. S. Patent (6,678,394 B1) to Nichani is cited for obstacle detection system.

U. S. Patent (5,761,326 B1) to Brady et al is cited for method and apparatus for machine vision classification and tracking.

Contact Information

7. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to ABOLFAZL TABATABAI whose telephone number is (703) 306-5917.

The Examiner can normally be reached on Monday through Friday from 9:30 a.m. to 7:30 p.m. If attempts to reach the examiner by telephone are

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unsuccessful, the Examiner's supervisor, Mehta Bhavesh M, can be reached at (703) 308-5246.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Abolfazl Tabatabai

Patent Examiner

Group Art Unit 2625

October 29, 2004

A-Tabatabai